

Project Recording Sheet**Ratios and Similarity****Growing Tiny Trees**

Do you like to grow things? Bonsai is something that everyone can do if they have patience and the desire for perfection. The bonsai grower uses both science and art as he or she creates a small model of a large tree.

Complete the table.

$$\text{Scale} = \frac{\text{bonsai height in inches}}{\text{natural height in inches}}$$

Tree	Natural Height (ft)	Natural Height (in.)	Bonsai Height (in.)	Approximate Scale
Chinese Elm	60	720	10	$\frac{1}{72}$
Brush Cherry	50	600	8	$\frac{1}{75}$
Juniper	10		6	
Fig	30		29	
Japanese Maple	12		28	
Pitch Pine	200		14	
Red Cedar	80		20	
Eastern Hemlock	80		18	

Project: Find a picture of a tree that you like. Find out how tall the tree is in nature. Construct a scale model or drawing of the tree. Label the scale. Compare your model or drawing with those of your classmates. How does the scale help you understand the natural tree?

Extension: What is the weight comparison between a bonsai tree and the natural-sized tree?

Extension: Visit a nursery that specializes in bonsai and begin a project of your own.